

First Records of *Notapictinus aurivillii* (Bergroth), a Little-known Flatbug, for Virginia and the Carolinas (Heteroptera: Aradidae)

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ABSTRACT

Notapictinus aurivillii (Bergroth), family Aradidae, heretofore documented only from a few localities in Georgia, Florida, and Louisiana, is reported for the first time from 13 sites in Virginia and one site each in North Carolina and South Carolina. Comparison is made with other local genera of the family, and some useful taxonomic features are noted and illustrated.

Key words: anatomy, Aradidae, distribution, *Notapictinus*, Virginia.

Under the name *Pictinus aurivillii*, a miniature flatbug was described by Ewald Bergroth (1887) from "Georgia." It was subsequently documented from Bayou Sara, Louisiana, and Crescent City, Florida, by Heidemann (1904). Blatchley's manual (1926) and Froeschner's catalogue of Nearctic aradids (1988) cited only these three states in their accounts of the species, and that is apparently the extent of our present knowledge of its distribution. The species was referred to the new genus *Notapictinus* by Usinger & Matsuda (1959) and entered in a key to the 25 species of this genus by Kormilev (1964), although he did not specify actually having seen any specimens.

Since 1989, specimens of a tiny aradid have been accumulating at the Virginia Museum of Natural History under the assumed status of a form of *Mezira* and were not examined closely until recently, when comparison with named specimens of *Mezira*, *Neuoctenus*, and *Aneuris* showed that a different genus was involved. Reference to Blatchley's manual suggested the species could belong in *Notapictinus*, although such an identity seemed improbable because of both the geographic disjunction and the frequency with which it had been found in Virginia. Eventually, specimens were sent to Dr. Thomas J. Henry, who confirmed their identity with material of *N. aurivillii* from Florida and Georgia in the National Museum of Natural History.

Curious that an insect apparently very rare in the Gulf Coastal Plain should be frequently collected in Virginia, I inquired of several regional museums in an attempt to locate additional, unreported specimens. Although no

attempt was made to conduct an exhaustive survey of all possible resources, it became evident that museum collections are generally very deficient as far as this species is concerned.

The following new records are listed in a north to south sequence. All specimens cited from Virginia are housed in the Virginia Museum of Natural History, those in other repositories are identified by the following codons: NCSU: North Carolina State University, UGA: University of Georgia; FSCA: Florida State Collection of Arthropods.

VIRGINIA: *Accomack Co.*: Chincoteague National Wildlife Refuge, "White Hills" DF site, 28 June-8 July 1998, S. M. Roble (1). *Cumberland Co.*: 7 km S of Columbia, berleseate in mixed hardwoods, 20 April 1996, VMNH survey (2). *Fluvanna Co.*: Kent's Store, 16 April-4 May 1995, VMNH survey (1). *Greensville Co.*: 2.5 mi NW of Skippers, from pitfall, 18 June 1990. J. C. Mitchell (1). *Isle of Wight Co.*: Antioch Pines Natural Area Preserve, 10 km S of Zuni, pitfall, 30 April 2002, VDNH survey (1). *Mecklenburg Co.*: Elm Hill Wildlife Management Area, 5-22 April (2), and 5-19 June 1991 (2), both VMNH survey. *Prince William Co.*: Prince William Forest Park, floodplain DF site, 3 October 1988, D. A. Young (1). *York Co.*: Grafton Ponds, 11 June 1990, C. A. Pague (1), 19 October 1990, K. A. Buhlmann (1); Cheatham Annex, Naval Supply Station, 30 May 1990, K. A. Buhlmann (1). *City of Suffolk*: South Quay pine barrens, 6 mi SSE Franklin, 4 November 2003, S. M. Roble (2). *City of Virginia Beach*: Fentress Naval Air Station, 9 April 1990 (1), 6 June 1989 (2), both K. A.

Buhlmann; First Landing State Park, dune DF site, 8 September 1989, Buhlmann (1); Fort Story, 22 July 1995, D. A. Young (1); Little Creek Amphibious Base, 3 June (1), 21 June (1), 24 July 1989 (1), all Buhlmann; Munden Point, 2 miles south of Creeds, 18 June 1990, N. L. Bland (1).

NORTH CAROLINA: *Bladen Co.*: Bladen Lakes State Forest, 5.5 km SW of Ammon, 8 September 1991, J. Zhang (NCSU 1). *Wayne Co.*: Goldsboro, 19 March 1993, T. Daggy (NCSU 1).

SOUTH CAROLINA: *Georgetown Co.*: Hobcaw Plantation, 14 December 1974, J. F. Cornell (NCSU 2).

GEORGIA: *Clarke Co.*: Georgia Botanical Garden, 13

May 1975 (UGA). *Decatur Co.*: without specific locality (FSCA 1). *Tift Co.*: Tifton, 10 May 1975 (UGA).

FLORIDA: *Alachua Co.*: Gainesville (FSCA 2). *St. Johns Co.*: without specific locality, 25 March 1949 (3), T. Daggy (NCSU).

While most of the foregoing localities are in the Atlantic Coastal Plain, three of the Virginia sites are well inland in the central Piedmont, as are the sites in Clarke and Decatur counties, Georgia. The northernmost locality, in Prince William Co., Virginia, is less than 30 miles (50 km) from the District of Columbia, and evokes surprise that the species was not found there by such skilled early collectors as E. A. Schwarz, Otto Heidemann, and Henry Ulke (nor by anyone since).

Most of the scant information to be gleaned from pin labels suggests that the majority of specimens were captured in pitfall traps, most of which, in Virginia at least, appear to have been sited in dry, sandy habitats. However, the two bugs from Cumberland County were taken by Berlese extraction of litter from broadleaf mesophytic forest. Labels with the pair from Georgetown Co., South Carolina, carry the notation "*Neotoma* nest." In Blatchley's key (1926: 317) to eastern genera of mezirine Aradidae, *Notapictinus* is identified by the combination of distally acute pronotum (against broadly rounded in *Aneurus*) and absence of venation in the hemelytral membrane (present in other genera). In the material at my disposal, the appearance of the membrane varies substantially within the general rugulose-vermiculate condition, with occasional vestiges of an antecedent venation evident. If this somewhat ambivalent character is overlooked as diagnostic, the most similar local relative appears to be *Neuroctenus*, which is, however, easily distinguished by the presence of a sharp submarginal ridge between the stigmata and lateral edges of the sterna.

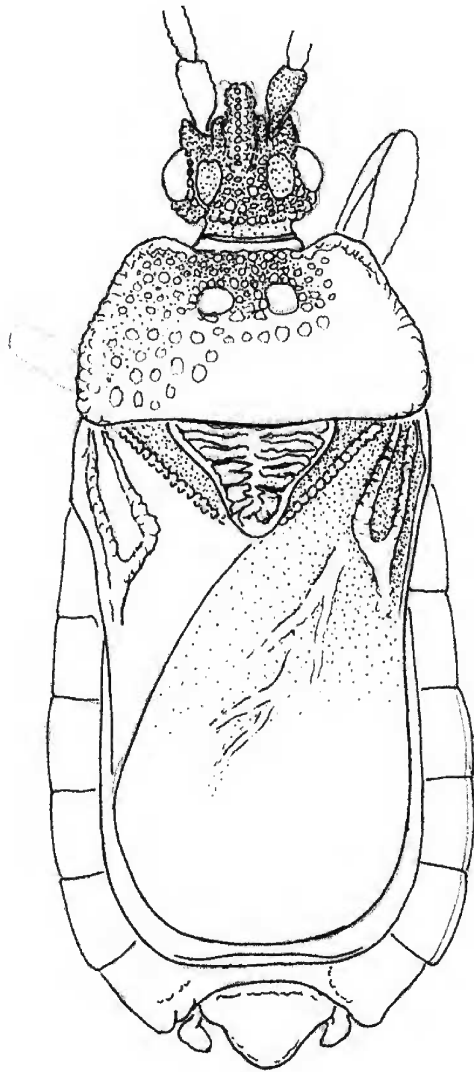


Fig. 1. Habitus sketch of *Notapictinus aurivillii*, dorsal aspect, showing transverse rugae of scutellum and vestiges of hemelytral venation.

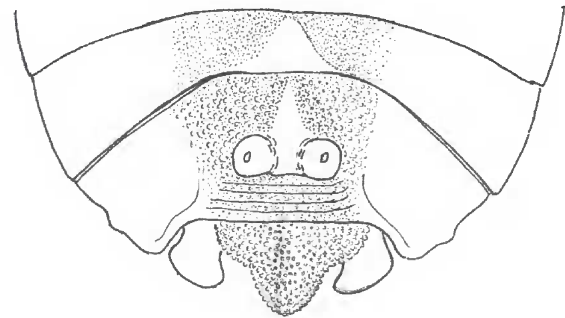


Fig. 2. Same specimen as in Fig. 1, ventral aspect of terminal abdominal segments showing modifications of 5th sternum peculiar to the male sex.



Fig. 3. Distributional records for *Notapictinus aurivillii*.

There remains to be explained the anomalous distributional pattern (Fig. 3) of a member of a dominantly tropical genus being most frequently collected at the northern extremity of its "Lower Austral" distribution in southeastern United States.

ACKNOWLEDGEMENTS

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Ziesk (FSCA) for searching through aradid material under their care for additional records for *Notapictinus*. Most of the Virginia specimens came to VMNH through the interest of Virginia Division of Natural Heritage (VDNH) zoologists Christopher A. Pague and Steven M. Roble. Thomas J. Henry (Systematic Entomology Lab, USDA) confirmed my identification by comparison with named specimens in the U. S. National Museum.

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